Rivers and Streams

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Evaluation of Distribution and Seasonal Movements of Flathead Catfish in Iowa's Rivers

One factor that has made it difficult to evaluate and manage river catfish populations is a lack of understanding of biologically meaningful boundaries for these populations. Unlike lakes, rivers are open systems where fish may move long distances and occupy different habitats within the system during different seasons. As a result, the population of a species in a given river reach may vary considerably, depending on the time of year that it is examined. Management actions directed at a target species in a specific river reach may not be effective if a significant portion of the population spends part of the year outside of that reach. By accurately determining the boundaries of a species' population, fisheries managers can identify the appropriate spatial scale for management actions.

One step toward determining boundaries of Iowa's interior river flathead catfish populations is to determine species distribution in the state's river systems. A second step is to determine extent and timing of flathead catfish movements within these systems. Between August 2004 and September 2009, 56 flathead catfish were radio-tagged and tracked in the Iowa River between Iowa City and the Mississippi River. Results of our telemetry study suggest that flathead catfish in the Iowa River are more mobile than those in some studies in other states. Some fish in our study did not move far from their original tagging location, but many made long distance movements associated with overwintering and spawning. Although all fish were tagged in the Iowa River, five fish were found in the English River, and 13 fish were found in the Mississippi River. These fish were as much as 75 miles from the location where they were tagged. The study tracked 18 flathead catfish for a period of 2-4 years each. By tracking individual fish for multiple years, we were able to determine that most of these fish made repeated movements between areas that they used for spawning, late-summer, and overwintering habitat each year. The study has given us a better understanding of the dynamic nature of Iowa's river flathead populations that will aid in the management of this important resource.